

ISO TC184/SC4

PROCEDURES FOR TRANSPOSING EXTERNALLY DEVELOPED SPECIFICATIONS INTO ISO DELIVERABLES

These procedures have been designed to enable SC4 to take an Externally Developed Specification, which meets certain criteria, and transpose it for acceptance and accreditation as an International Standard (IS), Technical Specification (TS), or Publicly Available Specification (PAS).

- THE TRANSPOSITION PROCESS -

1 CONCEPTS

The transposition process is based on the following key concepts:

- **Quality Work Products Exist Outside ISO**

There exists a body of quality specifications of market relevance that would benefit from ISO acceptance and accreditation as an international standard or specification. These products are developed and published by a variety of organizations such as professional societies, industry associations, governmental agencies, regional and national standards bodies, and consortia.

- **Industrial Automation Will Benefit From Collaborative Standardization Initiatives**

Co-operative, joint, and collaborative standardization activities offer significant opportunities to produce higher quality specifications with broader global acceptance and implementation.

2. DEFINITIONS

- **Externally Developed Specifications**

A technical document developed outside the *de jure* ISO community is called an Externally Developed Specification if it meets certain criteria, making it suitable for submission into SC4 for possible processing as an ISO Deliverable i.e. International Standard (IS), Technical Specification (TS), or Publicly Available Specification (PAS). These criteria (see Annex A) have been established to ensure a high level of quality and proper treatment of Intellectual Property Rights (IPR) issues and related matters.

- **Document Originator**

Any organization that has developed, and hence, owns a technical document that is considered useful for transposition into an international specification or standard is called the document originator (submitter). There are no fundamental restrictions as to what form such an organization should have. The quality of the specification – not who developed it - is the touchstone of success for ISO endorsement.

- **Explanatory Report**

The submission of an externally developed specification must be accompanied by an Explanatory Report. This report provides all information necessary to support the submission. In particular, it should contain statements as to the extent that the SC4 evaluation criteria (Annex A) are met by the specification.

- **SC4 Assessment**

The Externally Developed Specification, together with the corresponding Explanatory Report, undergoes an internal SC4 assessment to judge its suitability and to determine the specific proposed category (i.e., IS, TS or PAS) of the document.^[HG1]

- **Transposition ballot**

The Externally Developed Specification, together with the corresponding Explanatory Report, is submitted for ballot, with the specific balloting criteria and process depending upon its recommended category as an IS, TS, or PAS.

3 APPLICABILITY

These procedures apply to the transposition of externally developed documents into International Standards (IS), Technical Specifications (TS), or Publicly Available Specifications (PAS). These procedures were developed for use in processing a broader class of documents from a more diverse set of sources than is currently served by the SC4 standards development process. Documents acceptable for consideration

must be related to activities within the SC4 scope.

4 PROCEDURES

Based on the above concepts, the SC4 transposition process is described below. It is SC4's firm intention to provide full process transparency and the current status of any proposal from its web site as referenced in the ISO TC 184/SC4 Handbook. Open dialogue (via the web site or any other available means) between a document submitter, SC4 and National Bodies is strongly encouraged.

4.1 Submission

Submission of an externally developed document to the SC4 Secretariat shall include an Explanatory Report that provides all information necessary to support the submission. In particular, it should contain statements concerning how the submitted externally developed document meets SC4 assessment criteria (see Annex A). All submissions, including the Explanatory Report, shall be in electronic form (Microsoft Word is preferred).

Submitters are encouraged to apply, if flexibility exists, a documentation style close to the ISO style to ease the later alignment process at the time of any revision.

The SC4 Secretariat, after checking the completeness of the application, will forward the document, together with the Explanatory Report, to the Chair for assignment to a Project Leader, task force, ad hoc, or a WG Convenor for assessment and to the SC4 membership for information. Based upon the SC4 assessment results and upon approval of the SC4 Chair, the SC4 Secretariat will initiate the process according to the proposed ISO deliverable type.

In view of the importance of the Explanatory Report for a successful transposition, the Submitter may request counsel and advice from SC4 National Bodies, Subcommittees or Category A liaison organizations during the generation of this report and throughout the transposition process. The counselling process could include a review of the submissions.

4.2 Transposition into an IS, TS, or PAS

4.2.1 SC4 shall take the following actions:

- Settle any outstanding issues regarding copyrights or trademarks so that the proposed text can be copied and distributed within ISO without restriction;
- Assess, in consultation with the ISO/CS, that SC4 is the competent committee for the subject covered in the proposed standard and ascertain that there is no evident contradiction with other ISO standards;
- Process the document according to the ISO Deliverable type, in accordance with ISO/IEC Directives Part 1 (www.iso.ch/sdis/).

4.2.2 The voting period and acceptance criteria are as follows

4.2.2.1 For International Standard (IS):

- The DIS Voting Period is five (5) months.
- At least two-thirds of the P-members voting shall have approved, with or without comments;
- Not more than one-quarter of the total number of votes cast are negative.
- The FDIS Voting Period is two (2) months, but may be skipped if 100% Approval is obtained at the DIS Vote.

4.2.2.2 For Technical Specification (TS):

- Voting Period is 90 days.
- At least two-thirds of the P-members voting shall have approved, with or without comments.

4.2.2.3 For Publicly Available Specification (PAS):

- Voting Period is 90 days.
- At least one-half of the P-members voting shall have approved, with or without comments.

4.2.3 After completion of the ballot, the SC4 Secretariat shall inform SC4 National Bodies and Liaison Organizations of the results of the ballot, and identify, if successful, the SC4 Working Group (WG) which will be responsible for any future work.

4.2.4 The original document Submitter shall receive a copy of the ballot document.

4.2.5 When necessary, the SC4 Secretariat shall make plans for the handling of ballot results through the formation of a ballot resolution group, as follows. The SC4 Secretariat shall:

- Schedule a ballot resolution group meeting to consider any comments on the ballot;
- Appoint a Project Leader for the ballot resolution group;
- Appoint a Project Editor for the document. It would be highly beneficial if the Project Editor is a representative of the original document submitter; the Project Editor shall be responsible for producing the final text of the technical specification or standard in case of acceptance.

- Notify the SC4 National Bodies of the ballot resolution group meeting date(s), location, Convenor, and Project Editor.

The ballot resolution meeting shall be open to representation from all affected interests (including the original document Submitter) and shall be convened in a timely manner.

4.2.6 Upon receipt of the ballot results, and any comments, the SC4 Secretariat shall distribute this material to the SC4 National Bodies and the document Submitter. When needed, the SC4 Secretariat shall also send notification of the ballot resolution group meeting to any National Bodies having voted to disapprove the externally developed specification that are not National Bodies of SC4. The National Bodies shall be requested to consider the comments and to form opinions on their acceptability.

National Bodies of SC4 shall appoint to the ballot resolution group one or more representatives who are well aware of the National Body position. National Bodies having voted negatively, whether or not a National Body of SC4, have a duty to delegate a representative to the ballot resolution group meeting. In circumstances where physical representation is not possible, participation via e-mail correspondence should be explored as an alternative method of representation.

4.2.7 At the ballot resolution group meeting, decisions shall be reached by consensus. Any votes of the National Bodies will be taken according to normal SC4 procedures. If the decisions reached are not acceptable to the original document Submitter, the document may be withdrawn and the procedure terminated.

4.2.8 If, after the deliberations of this ballot resolution group, the requirements of 4.2.2 are met, the Project Editor shall prepare the amended document and send it to the SC4 Secretariat who shall forward it to the ISO/CS for publication as an IS, TS, or PAS.

For its initial publication, the document is not required to be in ISO format, but can be published in its original format. The form of publication (e.g., reprint of original document or distribution of ISO cover page with reference) is to be determined by ISO/CS and the original document Submitter as part of any publication agreements. However, subsequent revisions shall be in the format prescribed by the ISO Directives.

4.2.9 If it is impossible to agree to a text meeting the requirements of 4.2.2, the proposal has failed. In this case, SC4 shall make known to the Submitter the reasons that have led to the negative result. Based on this information, the Submitter may choose to re-submit the specification after modification.

4.2.10 The SC4 assigned Project Leader shall prepare a full report of the proceedings that shall be distributed by the SC4 Secretariat to the membership and to the ISO/CS.

4.2.11 The time period for these different steps shall be:

- a total of 30 days for the SC4 Secretariat to distribute the results of the ballot to its National Bodies;

- not less than 45 days prior to the date of the ballot resolution group meeting for distribution of the voting results and any comments;
- not later than 15 days after the ballot resolution group meeting for distributions by the SC4 Secretariat of the final report and the final document text in case of acceptance.

4.2.12 If the proposed standard is accepted, it will be published following ISO standing copyright policy. Its maintenance will be handled by SC4 in accordance with SC4 rules and procedures (see SC4 Handbook).

The original document Submitter may withdraw the document from the transposition process at any point prior to publication. It is also the right of the Submitter to request that the document remain unchanged throughout the transposition process. Such a request should be clearly stated in the Explanatory Report, and may be an issue in the ballot process. Changes to the specification during the ballot process are, however, not acceptable as they will lead to confusion.

5. SC4 Assessment Criteria

SC4 has established comprehensive criteria that serve as a basis for judging whether a particular externally developed specification can be accepted as a candidate for transposition into an international standard, technical specification, or publicly available specification. These criteria may also be used by potential submitters to determine the level of suitability of their specification for the standardization process. The mandatory and supplemental assessment criteria are contained in the attached Annex A.

5.1 Mandatory Criteria

The SC4 mandatory assessment criteria (see Annex A) are broadly classified into three categories and address the following issues:

- Document Quality
- Intellectual Property Rights
- Document Maintenance

5.2 Supplementary Criteria

The SC4 supplementary criteria (see Annex A) are provided as elements to assist SC4 members, National Bodies, and Liaisons to better evaluate the origin of the externally developed specification and the intent of its submission into ISO for formal international recognition, acceptance and accreditation.

5.3 Additional Details

Additional details can be found in ISO TC184/SC4 N [number to be assigned] “Management Guidelines” for the Transposition of Externally Developed Specifications which is available from SC4 National Bodies and the SC4 Secretariat.

Annex A
SC4 Evaluation Criteria
for
Transposition of Externally Developed Specifications

I - MANDATORY CRITERIA

1 QUALITY

Within its scope the specification shall completely describe the functionality (in terms of interfaces, protocols, formats, etc) necessary for implementation of the document. If it is based on a product, it shall include all the functionality necessary to achieve the stated level of compatibility or interoperability in a product independent manner.

1.1) Completeness

- a) How well are all interfaces specified?
- b) How easily can implementation take place without need of additional descriptions?
- c) What proof exists for successful implementations (e.g. availability of test results for media standards)?

1.2) Clarity

- a) What means are used to provide definitive descriptions beyond straight text?
- b) What tables, figures, and reference materials are used to remove ambiguity?
- c) What contextual material is provided to educate the reader?

1.3) Testability

The extent, use and availability of conformance/interoperability tests or means of implementation verification (e.g. availability of reference material for magnetic media) shall be described, as well as the provisions the specification has for testability.

1.4) Stability

The specification shall have had sufficient review over an extended time period to characterize it as being stable.

a) How long has the specification existed, unchanged, since some form of verification (e.g., prototype testing, paper analysis, full interoperability tests) has been achieved?

b) To what extent and for how long have products been implemented using the specification?

1.5) Availability

a) Where is the specification available (e.g., one source, multinational locations, what types of distributors)?

b) How long has the specification been available?

c) Has the distribution been widespread or restricted? (describe situation)

d) What costs are associated with specification availability?

2. INTELLECTUAL PROPERTY RIGHTS:

The organization is requested to make known their position on the items listed below. In particular, there shall be a written statement of willingness of the organization and its members, if applicable, to comply with the ISO patent policy in reference to the candidate document under consideration.

Note: Each SC4 National Body should investigate and report the legal implications of this section.

2.1) Patents:

a) How willing are the organization and its members to meet the ISO policy on these matters?

b) What patent rights, covering any item of the proposal, is the original document owner aware of?

2.2) Copyrights:

a) What copyrights have been granted relevant to the subject specification(s)?

b) What copyrights, including those on implementable code in the specification, is the document originator willing to grant?

c) What conditions, if any, apply (e.g., copyright statements, electronic labels,

and logos)?

2.3) Distribution Rights:

- a) What distribution rights exist and what are the terms of use?
- b) What degree of flexibility exists relative to modifying distribution rights; before the transposition process is complete, after transposition completion?
- c) Is dual/multiple publication and/or distribution envisaged, and if so, by whom?

2.4) Trademark Rights:

- a) What trademarks apply to the subject specification?
- b) What are the conditions for use and are they to be transferred to ISO in part or in their entirety?

2.5) Original Contributions:

- a) What original contributions (outside the above IPR categories) (e.g., documents, plans, research papers, tests, proposals) need consideration in terms of ownership and recognition?
- b) What financial considerations are there?
- c) What legal considerations are there?

3. DOCUMENT MAINTENANCE:

3.1) Ongoing Maintenance

- a) What is the willingness and resource availability to conduct ongoing maintenance, interpretation, and 5 year revision cycles following SC4 approval process?
- b) What level of willingness and resources are available to facilitate specification progression during the transposition process (e.g., technical clarification and normal document editing)?
- c) Is the Submitter willing and able to commit technical resources and support to co-operate with SC4 for both on-going document maintenance and revision.

3.2) *Change Control*

- a) What mechanisms are in place to track versions, fixes, and addendum's?
- b) Who will be responsible for version control?

II - SUPPLEMENTAL CRITERIA

1. COOPERATIVE STANCE

There should be evidence of a co-operative attitude toward open dialog, and a stated objective of pursuing standardization in the SC4 arena. The SC4 community will reciprocate in similar ways, and in addition, will recognize the organization's contribution to international standards. It is SC4's intention to avoid any divergence between the SC4 revision of a transposed externally developed specification and a version published by the originator. Therefore, the Submitter is invited to work closely with SC4 in revising or amending a transposed candidate original document. The following issues should be addressed in the Explanatory Document:

1.1) Commitment to Working Agreement(s)

- a) What working agreements have been provided, how comprehensive are they?
- b) How manageable are the proposed working agreements (e.g. understandable, simple, direct, devoid of legalistic language except where necessary)?
- c) What is the attitude toward creating and using working agreements?

1.2) Changes during transposition

- a) What are the expectations of the Submitter towards technical and editorial changes to the specification during the transposition process?
- b) How flexible is the submitting organization toward using only portions of the proposed specification or adding supplemental material to it?

1.3) Future Plans

- a) What are the intentions of the submitting organization toward future additions, extensions, deletions or modifications to the specification? Under what conditions? When? Rationale?
- b) What willingness exists to work with SC4 on future versions to avoid divergence? Note that the answer to this question is particularly relevant in cases where doubts may exist about the longevity or openness of the Submitter organization.
- c) What is the scope of the organization activities relative to specifications similar to, but beyond that being proposed?

2 DEVELOPMENT PROCESS

The accompanying report shall describe the extent of consensus (if any) that the document has already achieved.

2.1) Development Consensus:

- a) Describe the process by which the specification was developed.
- b) Describe the process by which the specification was approved.
- c) What "levels" of approval have been obtained?

2.2) Response to User Requirements:

- a) How and when were user requirements considered and utilized?
- b) To what extent have users demonstrated satisfaction?

2.3) Market Acceptance:

- a) How widespread is the market acceptance today? Anticipated?
- b) What evidence is there of market acceptance?

2.4) Credibility:

- a) What is the extent and use of conformance tests or means of implementation verification?
- b) What provisions does the specification have for testability?

3 ALIGNMENT

The specification should be aligned with existing SC4 standards or ongoing work and thus complement existing standards, architectures and style guides. Any conflicts with existing standards, architectures and style guides should be made clear and justified.

3.1) Relationship to Existing Standards:

- a) What international standards are closely related to the specification and how?
- b) To what international standards is the proposed specification a natural extension?

- c) How is the specification related to emerging and ongoing SC4 projects?

3.2) *Adaptability and Migration:*

- a) What adaptations (migrations) of either the specification or international standards would improve the relationship between the specification and international standards?
- b) How much flexibility do the proponents of the specification have?
- c) What are the long range plans for new/evolving specifications?

3.3) *Substitution and Replacement:*

- a) What needs exist, if any, to replace an existing international standard?
Rationale?
- b) What is the need and feasibility of using only a portion of the specification as an international standard?
- c) What portions, if any, of the specification do not belong in an international standard (e.g., too implementation specific)?

3.4) *Document Format and Style*

- a) What plans, if any, exist to conform to SC4 document styles? Note: For the first submission, ISO acceptance of original document “as is” but need to conform to ISO format/style requirements with the first update/amendment.